Fujitsu recommends Windows.

# Data Sheet
# FUJITSU ESPRIMO P920 E90+ Desktop PC

## Excellent Performance, Expandability and Efficiency

FUJITSU ESPRIMO P920 PCs give you the absolute highest PC manageability, performance and expandability. With the 92% efficient power supply, you'll also save on energy costs. The use of identical components within the family ensures perfect infrastructure compatibility. At retirement, Fujitsu's distinctive EraseDisk option wipes your data securely.

**Microtower**
Maximum performance and optimal extendability
- Top-quality, high-value microtower, 7 drive bays, 4 PCI express interfaces

**Green technology**
Fujitsu's contribution to environmental protection and sustainability
- Halogen-free printed circuit of mainboard and power supply, sophisticated product concept for the entire lifecycle

**Energy efficiency coupled with high performance**
Low power consumption combined with high performance
- 4th generation Intel® Core™ processor family, a switched monitor outlet and a power supply with 90% energy efficiency

**System management**
Simple system administration for complex IT infrastructures
- Intel® vPro™ technology (depending on processor) and DeskView manageability suite

**Quiet**
Pleasant working environment due to an extremely quiet system
- Innovative hardware design, optimized cooling concept ensures silent operations

# Components

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|---|---|
| **Processor** | Intel® Core™ i7-4790 processor (4 Cores / 8 Threads, 3.60 GHz, up to 4.0 GHz, 8 MB, Intel® HD Graphics 4600) * |
| | Intel® Core™ i5-4690 processor (4 Cores / 4 Threads, 3.50 GHz, up to 3.9 GHz, 6 MB, Intel® HD Graphics 4600) * |
| | Intel® Core™ i5-4590 processor (4 Cores / 4 Threads, 3.30 GHz, up to 3.7 GHz, 6 MB, Intel® HD Graphics 4600) * |
| | Intel® Core™ i3-4160 processor (2 Cores / 4 Threads, 3.60 GHz, 3 MB, Intel® HD Graphics 4400) |
| | Intel® Core™ i3-4150 processor (2 Cores / 4 Threads, 3.50 GHz, 3 MB, Intel® HD Graphics 4400) |
| | Intel® Core™ i3-4130 processor (2 Cores / 4 Threads, 3.40 GHz, 3 MB, Intel® HD Graphics 4400) |
| | Intel® Pentium® processor G3450 (2 Cores / 2 Threads, 3.40 GHz, 3 MB, Intel® HD Graphics) |
| | Intel® Pentium® processor G3440 (2 Cores / 2 Threads, 3.30 GHz, 3 MB, Intel® HD Graphics) |
| | Intel® Pentium® processor G3420 (2 Cores / 2 Threads, 3.20 GHz, 3 MB, Intel® HD Graphics) |
| | Intel® Pentium® processor G3250 (2 Cores / 2 Threads, 3.20 GHz, 3 MB, Intel® HD Graphics) |
| | Intel® Pentium® processor G3240 (2 Cores / 2 Threads, 3.10 GHz, 3 MB, Intel® HD Graphics) |
| | Intel® Pentium® processor G3220 (2 Cores / 2 Threads, 3.00 GHz, 3 MB, Intel® HD Graphics) |
| | Intel® Celeron® processor G1840 (2 Cores / 2 Threads, 2.80 GHz, 2 MB, Intel® HD Graphics) |
| | Intel® vPro™ Logo with Intel® Core i5 and Core i7 processors<br>*with Intel® Turbo Boost Technology (clock speed and performance will vary depending on workload and other variables)<br>Intel® Smart Response Technology supported by Intel® Core™ i3, i5 and i7 processors |
| **Operating systems** | |
| **Operating system** | Windows 8.1<br>Windows 8.1 Pro<br>Windows 7 Professional 64-bit<br>Windows 7 Professional 32-bit |
| **Operating system compatible** | openSUSE Linux |
| **Memory modules** | 2 GB (1 module(s) 2 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM |
| | 4 GB (1 module(s) 4 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM |
| | 8 GB (1 module(s) 8 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM |
| **Hard disk notes** | Up to 20 GB of HDD space is reserved for system recovery<br>SED (Self-Encrypting Drive)<br>SSD (Solid State Disk)<br>SSHD (Solid State Hard Disk, Hybrid drive) |
| **Hard disk drives (internal)** | SSHD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch |
| | SSHD SATA III, 5,400 rpm, 500 GB, 2.5-inch |
| | SSD SATA III Premium, 512 GB, 2.5-inch |
| | SSD SATA III Premium, 256 GB, 2.5-inch |
| | SSD SATA III Premium, 128 GB, 2.5-inch |
| | SSD SATA III, 256 GB, 2.5-inch, SED |
| | SSD SATA III, 256 GB, 2.5-inch |
| | SSD SATA III, 128 GB, 2.5-inch, SED |
| | SSD SATA III, 128 GB, 2.5-inch |
| | HDD SATA III, 7,200 rpm, 2,000 GB, 3.5-inch |
| | HDD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch |
| | HDD SATA III, 7,200 rpm, 500 GB, 3.5-inch, business critical |
| | HDD SATA III, 7,200 rpm, 500 GB, 3.5-inch |
| | HDD SATA III, 7,200 rpm, 250 GB, 3.5-inch |
| | HDD SATA II, 5,400 rpm, 320 GB, 2.5-inch |

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| Graphics | NVIDIA® NVS 300, 512 MB |
| | NVIDIA® NVS 300, 1 GB |
| | NVIDIA® GeForce® GT630 DisplayPort 2GB FH "0-Watt", 2 GB |
| | NVIDIA® GeForce® 605 DisplayPort 1GB FH, 1 GB |
| | LFH59/ 2x DVI-I adapter cable |
| | LFH59/ 2x DP adapter cable |
| | DVI to VGA Adapter |
| | DP to DVI-D (single link) Adapter Cable |
| | DP Extension Card |
| | ATI Radeon® HD7350 1GB FH, 1 GB |
| | AMD® Radeon R9 255 FH, 2 GB |
| | 2nd NVIDIA® Quadro® NVS 300, 512 MB |
| Drives (optional) | BD Triple Writer SATA slim (tray) |
| | DVD-ROM |
| | DVD Super Multi |
| | MultiCard Reader 24in1 USB 2.0 3.5" |
| Interface add on cards/components (optional) | |
| | WLAN 802.11 a/g/n (2x2), (dedicated regions only, not for Indonesia) |
| | Parallel Interface |
| | Gigabit Ethernet PCIe x1, DS |
| | eSATA Interface |
| | Dual serial card PCIe x1 |

# Base unit

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|---|---|
| **Base unit** | ESPRIMO P920 E90+ |
| Mainboard | |
| **Mainboard type** | D3222 |
| **Formfactor** | µATX |
| **Processor** | (), , |
| **Chipset** | Intel® Q87 |
| **Processor socket** | LGA 1150 |
| **Processor quantity maximum** | 1 |
| **Memory slots** | 4 DIMM (DDR3) |
| **Supported capacity RAM (max.)** | 32 GB |
| **Memory frequency** | 1,600 MHz |
| **Memory notes** | Dual channel support.<br>For dual channel performance, a minimum of 2 memory modules have to be ordered. Capacity per channel has to be the same. |
| **LAN** | 10/100/1,000 MBit/s Intel® I217LM |
| **BIOS version** | AMI Aptio 4.6 |
| **BIOS features** | BIOS Flash EPROM update by software<br>Recovery BIOS<br>Unified Extensible Firmware Interface (UEFI) |
| **Audio type** | On board |
| **Audio codec** | Realtek ALC671 |
| **Audio features** | Internal speaker supports audio playback, High Definition audio, 5.1 surround sound |
| I/O controller on board | |
| **Serial ATA total** | 6 |

| | |
|---|---|
| **I/O controller on board** | |
| thereof SATA III | 6 |
| thereof eSATA | 2 |
| Controller functions | Serial ATA II (3 Gbit)<br>Serial ATA III (6 Gbit)<br>NCQ<br>AHCI<br>RAID 0/1/5/10 |
| **Interfaces** | |
| Audio: line-in | 1 |
| Audio: line-in / microphone | 1 |
| Audio: line-out | 1 |
| Front audio: microphone | 1 |
| Front audio: headphone | 1 |
| USB 2.0 total | 10 |
| USB 3.0 total | 4 |
| USB front | 4x 2.0 or 2x 2.0/ 2x 3.0 (optional) |
| USB rear | 4x 2.0 / 2x 3.0 |
| USB internal | 2 |
| VGA | 1 |
| DisplayPort | 1 (second DisplayPort optional) |
| DVI | 1 (DVI-D) |
| Serial (RS-232) | 1 (9pin, 16 byte FIFO, 16550 compatible) |
| Mouse / Keyboard (PS/2) | 2 |
| Ethernet (RJ-45) | 1 |
| Parallel | 1 (optional) (25pin with EPP and ECP) |
| eSATA | 1 (optional) |
| Interface Module notes | Anytime USB charge functionality |
| **Input device / components** | |
| | Optical USB wheel mouse |
| Input devices (optional) | Optical USB/PS2 tilt wheel mouse<br>KBPC PX ECO<br>Mouse M440 ECO |
| **Drive bays** | |
| Drive bays total | 7 |
| 2.5-inch internal bays | 1 |
| 3.5-inch internal bays | 2 |
| 3.5-inch external bays | 2 |
| 5.25-inch external bays | 2 |
| **Slots** | |
| PCI-Express 3.0 x16 | 1 x (312 mm / 12.29 inch) Full height |
| PCI-Express 2.0 x4 (mech. x16) | 1 x (312 mm / 12.29 inch) Full height |
| PCI-Express x1 | 2 x (170 mm / 6.7 inch) Full height |
| **Graphics on board** | |
| Graphics brand name | Intel® HD Graphics, HD Graphics 4400, HD Graphics 4600 (depending on processor) |
| Shared video memory | up to 1,782 MB |
| TFT resolution (VGA) | 1,024 x 768 pixel<br>1,280 x 1,024 pixel<br>1,360 x 768 pixel<br>1,440 x 900 pixel<br>1,600 x 900 pixel<br>1,600 x 1,200 pixel<br>1,680 x 1,050 pixel<br>1,920 x 1,080 pixel |

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|---|---|
| **Graphics on board** | |
| **TFT resolution (DVI)** | 1,280 x 1,024 pixel<br>1,360 x 768 pixel<br>1,440 x 900 pixel<br>1,600 x 900 pixel<br>1,680 x 1,050 pixel<br>1,920 x 1,080 pixel<br>1,920 x 1,200 pixel |
| **TFT resolution (DisplayPort)** | 1,280 x 1,024 pixel<br>1,360 x 768 pixel<br>1,440 x 900 pixel<br>1,600 x 900 pixel<br>1,680 x 1,050 pixel<br>1,920 x 1,080 pixel<br>1,920 x 1,200 pixel<br>2,560 x 1,440 pixel<br>2,560 x 1,600 pixel<br>3,840 x 2,160 pixel (requires Intel® Core™ i3, i5 or i7 processor) |
| **Graphics features** | Support for up to three independent displays<br>DirectX® 11.1<br>HDCP support<br>Open CL® 1.2<br>OpenGL® 4.0<br>One DisplayPort connector can be converted to DVI-D or HDMI with an optional external adapter<br>For multi monitoring mode, graphics card and integrated graphics run in parallel (Microsoft® Windows® 7 or Windows 8) |
| **Graphics notes** | up to 1 GB dedicated video memory (main memory owned and locked for graphics use)<br>Tested resolutions, depending on display type additional resolutions and frequencies possible<br>Shared memory depending on main memory size and operating system<br>Resolution (color depth up to 32 Bit/pixel)<br>For TFT we recommend using 60Hz |
| **Electrical values** | |
| **Power efficiency note** | power supply efficiency (at 230V; 20% / 50% / 100% load) : 88% / 92% / 91% |
| **Rated voltage range** | 100 V - 240 V |
| **Rated frequency range** | 50 Hz - 60 Hz |
| **Operating voltage range** | 90 V - 264 V |
| **Operating line frequency range** | 47 Hz - 63 Hz |
| **Max. output of single power supply** | 280 W |
| **Power factor correction/active power** | active |
| **Monitor outlet** | Switched |
| **Power consumption** | |
| **Power consumption note** | See white paper Energy Consumption |
| **Link to Energy White Paper** | http://docs.ts.fujitsu.com/dl.aspx?id=0b4253a2-b9de-456f-a99b-3453d4ba2bf9 |
| **Heat dissipation** | |
| **Heat dissipation notes** | See white paper Energy Consumption |
| **Noise emission** | |
| **Related Processors for noise** | Intel® Core™ i7 4770 |
| **Standard noise emission** | 2x2 GB, HDD, ODD, Windows<br>According to ISO 7779:2010, ECMA-74 |
| **Standard noise notes / description** | A-weighted sound power level Lwad (in B) / Workplace related A-weighted sound pressure level LpAm (in dB(A)) |
| **Standard noise operation mode: CPU 50% load** | 4.0 B / 26 dB(A) Bystander ; 31 dB(A) Operator position |
| **Standard noise operation mode: HDD load** | 3.4 B / 21 dB(A) Bystander ; 26 dB(A) Operator position |
| **Standard noise operation mode: Idle mode** | 3.3 B / 19 dB(A) Bystander; 23 dB(A) Operator position |

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| **Noise emission** | |
| **Standard noise operation mode: ODD load** | 4.5 B / 31 dB(A) Bystander ; 36 dB(A) Operator position |
| **Standard noise operation mode: Office applications 2.0** | 3.3 B / 19 dB(A) Bystander; 23 dB(A) Operator position |
| **Blue angel noise emission according certification** | According to ISO 7779:2010, ECMA-74<br>for max. possible configuration |
| **Blue angel noise notes / description** | A-weighted sound power level Lwad (in B); 1B = 10dB |
| **Blue angel noise operation mode: HDD load** | 3.7 B = 37 dB (A) |
| **Blue angel noise operation mode: Idle mode** | 3.3 B = 33 dB (A) |
| **Blue angel noise operation mode: ODD load** | 4.5 B = 45 dB (A) |
| **Dimensions / Weight / Environmental** | |
| **Dimensions (W x D x H)** | 175 x 419 x 395 mm<br>6.89 x 16.5 x 15.56 inch |
| **Operating position** | Vertical |
| **Weight** | 11 kg |
| **Weight (lbs)** | 24.25 lbs |
| **Weight notes** | Actual weight may vary depending on configuration |
| **Operating ambient temperature** | 10 - 35 °C (50 - 95 °F) |
| **Operating relative humidity** | 5 - 85 % (relative humidity) |
| **Compliance** | |
| **Product** | ESPRIMO P920 |
| **Model** | MI5W |
| **Germany** | TÜV GS<br>Blauer Engel / Blue Angel |
| **Europe** | CE |
| **USA/Canada** | FCC Class B<br>cCSAus |
| **Global** | RoHS (Restriction of hazardous substances)<br>WEEE (Waste electrical and electronic equipment)<br>Microsoft Operating Systems (HCT / HCL entry / WHQL)<br>EPEAT® Gold (dedicated regions)<br>ENERGY STAR® 6.0 (dedicated regions) |
| **Compliance link** | http://globalsp.ts.fujitsu.com/sites/certificates |
| **Additional Software** | |
| **Additional software (preinstalled)** | Workplace Protect (secure authentication solution)<br>Adobe® Reader® (pdf reader)<br>McAfee Multi Access Security (anti-virus and internet security software; 60 days trial version)<br>Win7: Fujitsu Recovery (hard disk based recovery)<br>Win8: Microsoft Push Button Recovery (hard disk based recovery)<br>Microsoft Office (buy license to activate the pre-installed Microsoft Office) |
| **Additional software (optional)** | Recovery DVD for Windows®<br>Drivers & Utilities DVD (DUDVD)<br>CyberLink PowerDVD BD (playback software for Blu-ray Disc™)<br>CyberLink PowerDVD DVD (playback software for DVD)<br>Nero Essentials XL |
| **Manageability** | |
| **Manageability technology** | DeskUpdate Driver management<br>PXE 2.1 Boot code<br>Wake up from S5 (off mode)<br>Intrusion switch (optional)<br>iAMT 9.0 (depending on CPU)<br>WoL (Wake on LAN) |

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| **Manageability** | |
| **Manageability software** | DeskView Client<br>DeskView Instant BIOS Management<br>DeskView Integration for Symantec Management Platform |
| **DeskView components** | Inventory Management<br>BIOS Management<br>Driver Management<br>Security Management<br>Alarm Management |
| **Supported standards** | DMI<br>PXE<br>WMI |
| **Manageability link** | http://www.fujitsu.com/fts/manageability |
| **Security** | |
| **Physical Security** | Kensington Lock support<br>Eye for padlock<br>Integrated cabinet lock (optional) |
| **System and BIOS Security** | EraseDisk (optional)<br>Boot sector virus protection<br>Write protect option for the Flash EPROM<br>Embedded security (TPM 1.2)<br>Control of all USB interfaces<br>External USB ports can be disabled separately<br>Control of external interfaces |
| **User Security** | User and supervisor BIOS password<br>Hard disk password<br>Access protection via external SmartCard reader (optional)<br>Access protection via internal SmartCard reader (optional) |
| **Miscellaneous** | |
| | Keyboard on (Special Fujitsu keyboard required)<br>Thermal management<br>Extended lifetime |
| **Serviceability** | |
| | EasyFix<br>EasyChange for HDD<br>EasyChange for optical drives |
| **Packaging information** | |
| **Packaging dimension (mm)** | 516 x 278 x 562 mm |
| **Packaging dimension (inch)** | 20.31 x 10.94 x 22.13 inch |
| **Max. quantity / pallet** | 28 |
| **Material - Weight (g) Carton** | 1405 g |
| **Material - Weight (lbs) Carton** | 3.1 lbs |
| **Material - Weight (g) EPS / PS** | 160 g |
| **Material - Weight (lbs) EPS / PS** | 0.35 lbs |
| **Material - Weight (g) PE** | 60 g |
| **Material - Weight (lbs) PE** | 0.13 lbs |
| **Packaging notes** | printed user documentation is bleached in chlorine free process |
| **Warranty** | |
| **Standard Warranty** | 3 years (depending on country) |
| **Service level** | Bring-In / Onsite Service (for countries within region FTS CEMEA&I, for all other countries depending on local regulations, minimum: 2 years material warranty) |
| **Warranty Terms & Conditions** | http://support.ts.fujitsu.com/warranty |
| **Maintenance and Support Services - the perfect extension** | |
| **Recommended Service** | 9x5, Response Time: Next Business Day |
| **Spare Parts availability** | 5 years after end of product life |
| **Service Weblink** | http://www.fujitsu.com/fts/services/support |

# Recommended Accessories

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|---|---|---|
| **Display B23T-7 LED** | The FUJITSU B23T-7 LED Display with excellent ergonomics makes intensive office work extremely comfortable.<br>This highly reliable display offers superb usability and power-saving features to help reduce your labor as well as energy costs. With wide viewing angle technology, flexible connectivity, and easy manageability, the FUJITSU B23T-7 LED Display can help you improve productivity. | Order Code:<br>S26361-K1496-V140 |
| **Display P24W-7 LED** | If you're a pixel, color and performance-hungry professional using demanding applications, the FUJITSU P24W-7 LED Display is the perfect choice. The display provides outstanding picture performance thanks to a cutting-edge graphic panel. It also boasts unique and innovative features such as our patent-applied Presence Sensor technology and the Always Available Powered USB Hub. | Order Code:<br>S26361-K1498-V140 |
| **Mouse M440 ECO** | Fujitsu Mouse M440 ECO is made from 100% bio material and has a completely PVC free cable. The elegant M440 ECO works on nearly every surface and follows all your hand movements smoothly and precisely.<br>It features two main buttons and as well as a scroll wheel providing comfortable computing to both right and left-handed users. | Order Code:<br>S26381-K450-L200 |
| **SOUNDSYSTEM DS E2000 Air** | The new more powerful SOUNDSYSTEM DS E2000 Air gives you impressive, well-balanced sound throughout the frequency band. It is an unbeatable USB speaker set with a surprisingly small form factor. The robust satellite speakers are decorated with a deluxe piano finish and the base is adorned with warm ambient lighting. | Order Code:<br>S26391-F7128-L600 |
| **UC&C USB Headset Stereo H650e** | The UC&C USB Headset Stereo H650e is the ultimate in style and functionality. Long, uncomfortable work calls are a thing of the past thanks to the cushioned ear pads and crystal clear sound. Adjustable headband and microphone provides the perfect fit for everyone. Optimized for Microsoft® Lync™ the headset displays a red 'in-call' LED to let your co-workers know when you're available, thus helping to boost office productivity. | Order Code:<br>S26391-F7139-L10 |
| **Busylight UC Lync** | Boost communication and productivity in the office with the Busylight. The genius of this device is that it both advertises your present working state and promotes the use of Lync, making your office more efficient. Perfect for the work environment in open-plan offices, the Busylight makes users feel comfortable with Lync's features and eases the transition from traditional office internal telephone systems. | Order Code:<br>S26391-F7139-L30 |
| **HS E2000 Communicator Headset** | The Fujitsu HS E2000 Communicator headset allows you to use your personal computer for Voice over IP (VoIP) in stereo audio quality. This premium headset is designed to provide superb audio quality and comfort for the telephony, internet chat, speech recognition, video conferencing and multimedia applications. | Order Code:<br>S26391-F7139-L5 |

**Keyboard KBPC PX ECO**

Fujitsu's KBPC PX ECO keyboard is the perfect contribution to Green IT. The keyboard is made out of 45% renewable raw material and comes with a PVC free USB cable. In addition, the KBPC PX ECO offers first class comfort and ergonomics. It attracts attention with its impressive modern design and useful extras.

S26381-K341-L1** (**: country specific variation)

# More information

## Fujitsu OPTIMIZATION Services

In addition to FUJITSU ESPRIMO P920 E90+, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

**Fujitsu Portfolio**
Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

**Computing Products**
www.fujitsu.com/global/services/computing/

**Software**
www.fujitsu.com/software/

## More information

Learn more about FUJITSU ESPRIMO P920 E90+, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/fts/ESPRIMO

## Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.
Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.
Please find further information at http://www.fujitsu.com/global/about/environment

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